

Response Under 37 C.F.R. §1.116
Expedited Procedure
Examining Group 2812

REMARKS

Response to §102(e) Rejection of Claims 1-3 and 5-9

In the July 5, 2006 Office Action, the Examiner finalized the previous rejection against claims 1-3 and 5-9 under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent No. 6,815,329 to Babich et al. (hereinafter "Babich").

Specifically, the Examiner referred to Figure 4, column 4, lines 61-67, column 5, lines 1-19 and 20-50, and column 6, lines 11-14 of Babich and asserted that Babich discloses rigid dielectric sidewall spacers formed of a material selected from the group consisting of SiCH, SiCOH, SiC, and SiO₂ (see Office Action, page 3, lines 1-5).

Applicants respectfully disagree with the Examiner's assertion.

Babich discloses at Figures 4A-4F, column 4, lines 61-67, and column 5, lines 1-19 a via level dielectric, which may comprise a solid, single component dielectric 160 as shown in Figure 4A, a two-component stack including a lower dielectric layer 170 or 190 and an upper dielectric layer 180 or 200 as shown in Figures 4B-4C, a three-component stack including layers 170, 190, and 200 as shown in Figure 4D, or conductive vias 210 with or without dielectric sidewall spacers 220 as shown in Figures 4E-4F. Babich further discloses at column 5, lines 20-50 that the various solid dielectrics in the via and line levels may be single or multiphase dielectric materials selected from the group consisting of silicon-containing materials such as amorphous hydrogenated silicon a-Si:H, SiO₂, Si₃N₄, SiO_xN_y, SiC, SiCO, SiCOH, SiCH, etc.

Babich also discloses at column 6, lines 11-14 that the dielectric sidewall spacers 140 are formed by a solid sidewall spacer material and that the overlying bridge layers 150 are formed by one or more solid dielectrics.

The above-quoted disclosure of Babich clearly indicates a distinction between the solid dielectrics, which are used for forming the via and line level dielectrics and the overlying bridge layers, and the solid sidewall spacer material, which is used for forming the dielectric sidewall spacers located in the via and line level dielectrics between the overlying bridge layers.

In the July 5, 2006 Office Action, the Examiner asserted that the description of the solid dielectrics by column 5 of Babich is general and is applicable to the dielectric sidewall spacers.

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However, nothing in Babich teaches or suggests the solid dielectrics can be used to form the dielectric sidewall spacers, or that the solid sidewall spacer material that forms the dielectric sidewall spacers is the same as the solid dielectrics that form the via and line level dielectrics or the overlying bridge layers, despite the Examiner's assertion.

The Examiner further asserted that column 4, lines 12-25 of Babich defines the purpose of the dielectric sidewall spacers and that the solid dielectric material listed in column 5 of Babich are fully capable of performing the key functions of the dielectric sidewall spacers as disclosed in column 4, lines 12-25 of Babich (see Office Action, page 6, paragraph 8).

However, a mere hindsight possibility that the various solid dielectrics listed in column 5, lines 20-50 of Babich could have been used to form dielectric sidewall spacers, in absence of any teaching or suggestion by Babich, is not sufficient for supporting the §102 rejection of claims 1-3 and 5-9.

In summary, Babich fails to disclose in any manner the specific dielectric materials used for forming the dielectric sidewall spacers, and it therefore cannot anticipate the rigid dielectric sidewall spacers that "are of a material selected from the group consisting of SiCH₃, SiCOH, and SiO₂," as positively recited by claims 1-3 and 5-9 of the present application.

Response to §103(a) Rejection of Claims 1-3 and 5-9

In the July 5, 2006 Office Action, the Examiner also rejected claims 1-3 and 5-9 under 35 U.S.C. §103(a) as allegedly obvious over the combination of U.S. Patent No. 6,284,657 to Chooi et al. (hereinafter "Chooi") with Babich.

However, Babich qualifies as prior art only under 35 U.S.C. §102(e), and the subject matter of the Babich patent and the claimed invention of the present application were owned by the same person, i.e., International Business Machines Corporation, at the time the claimed invention of the present application was made.

Therefore, the Babich reference cannot be used in combination with any other reference, including Chooi, to preclude the patentability of the claimed invention of the present application under the provision of 35 U.S.C. §103(c).

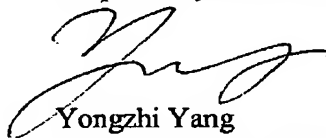
The rejection of claims 1-3 and 5-9 of the present application by the Examiner based on the combination of Chooi and Babich is thus improper.

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Based on the foregoing, Applicants respectfully request the Examiner to reconsider, and upon reconsideration to withdraw, the rejections of claims 1-3 and 5-9 of the present application. Issue of a Notice of Allowance for the application is correspondingly requested.

If any issues remain outstanding, incident to the formal allowance of the application, the Examiner is requested to contact the undersigned attorney at (516) 742-4343 to discuss same, in order that this application may be allowed and passed to issue at an early date.

Respectfully submitted,


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